

UVA-NIR Imager

3D Hyperspectral Video Camera

FirefLEYE

496 Blue



Advanced optical design

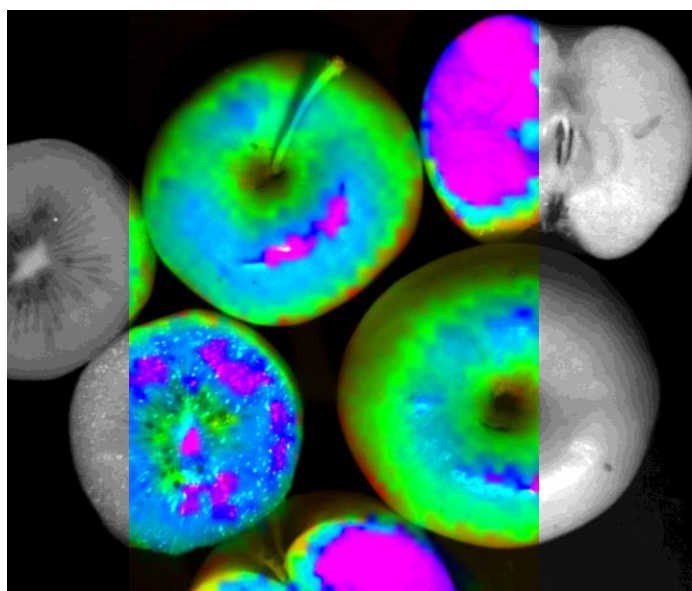
Need even more precision? The 496 Blue is the latest development of our hyperspectral FirefLEYE technology.

It doubles the spatial resolution: the size of both the panchromatic and the spectral sensor grew to 4 Megapixels, enabling the camera to record a high-resolution image of 4,900 spectra simultaneously.

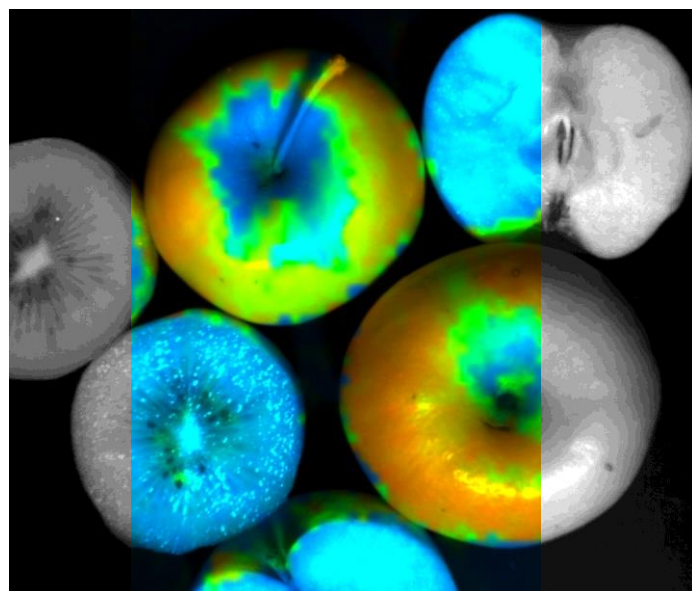
Blue Light Sensitivity & Double the Resolution

Advantages

- 3D hyperspectral snapshot imager (x, y, λ)
- 370-870 nm
- 4,900 spectra / cube
- 4 MP sensor
- Full video functionality
- Classification engine
- >60 predefined hyperspectral indices



Detect specific absorption features through sophisticated image classification



Apply a chlorophyll index and visualize the differences

Spectral Properties

Wavelength range	370 – 870 nm
Number of bands	125
Spectral resolution / FWHM	10 nm @ 532 nm
Spectral sampling	4 nm

Spatial Properties

Resolution pan	1600 * 1600 px
Resolution spectral	70 * 70 px
Data cube	4,900 spectra / cube

Optical Properties

Field of View (FOV)	30°, 20°, 13°, 7°
Macroscopy possible	Yes (close-up lenses)
Microscopy possible	Yes (relay optics)

Sensor Properties

Detector	Silicon CCD
Sensor size	4 Megapixel
Radiometric resolution	12 bit
Integration time	0.5 – 1000 ms
Frame rate	Appx. 3 Hz (fps)
Data size	12 MB / data cube

Camera Properties

Connection	USB 3.0 & GigE
Operation temperature	0 – 40° C
Protection class	IP 40
Power consumption	DC 12 V / 8 W
Size	313 * 76 * 85 mm
Weight	Appx. 1200 g

Special Features

To enable time-saving analyses, a complete **hyperspectral index library** for agricultural applications is fully integrated.

Furthermore, a **classification engine** based on machine learning is also available. This easy-to-use software add-on allows online classification directly in the live data stream.

What you should know

The spectral range of the 496 Blue is shifted towards shorter wavelengths covering **370-870 nm**, enabling analyses in the UVA and very short blue light.

In lab use the FirefLEYE can be equipped with **close-up lenses**, enabling **macroscopic-scale** viewing with a spot size of only a few mm to cm.

Attaching a **relay lens** to the FirefLEYE provides for full interchangeability of C-mount lenses, and enables the camera to your **microscope or endoscope** without the need of an additional calibration.

Suitable for:

MICROSCOPE

LAB

UAV & FIELD